

RESPONSE TO OFFICE ACTION

A. Status of the Claims

Claims 1-50 were pending at the time of the Action. Claims 1-14, 36-38 and 44-46 have been amended. Support for the amendments to the claims may be found in the specification at pages 6-9; at page 15, line 15; in the Examples on pages 23-24; and in the claims as originally filed. Claims 4, 5, 11-14, and 37-38 are canceled herein without prejudice or disclaimer. No new matter has been added.

Thus, claims 1-3, 6-10, 36, and 43-46 are now pending and presented for reconsideration.

B. Objection to the Specification under 37 C.F.R. 1.78 are Overcome

The Action states that the specification of the application is objected to for failing to recite the priority to a previously filed application as required under 37 C.F.R. 1.78(a)(2) and (a)(5). In response, Applicants have amended the specification to insert the parent application information. The amendment is timely made as the latter-filed application is based on an international application filed before November 29, 2000.

In view of the foregoing removal of the objection is respectfully requested.

C. Objection to the Claims are Overcome

The Action states that claim 36 is objected to for not clearly setting forth the method step. In response, Applicants have amended the claim in a manner believed to resolve this issue. Removal of the objection is thus respectfully requested.

D. Rejection Under 35 U.S.C. §112, First Paragraph – Written Description are Overcome

The Action rejects claims 1-14, 36-38 and 43-46 under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to convey to one of skill in the art that Applicants were in possession of the claimed subject matter at the time the specification was filed.

The Action contends that Applicants broadly claim isolated DNA fragment comprising an isoflavone *O*-methyltransferase gene; a DNA fragment that hybridizes to SEQ ID NO:1 under conditions of moderate stringency; other necessary enzymes of isoflavonoids biosynthesis; and recombinant DNA sequence encoding a portion of an isoflavone *O*-methyltransferase gene that increases the level of at least one 4' *O*-methyltransferase isoflavonoid compound in a transformed plant. The Action further contends that the specification fails to provide an adequate written description to support the breadth of the claims. The Action also contends that the specification fails to provide an adequate written description to support the genus of polynucleotides encompassed by the hybridization language as set forth in the claims. Applicants respectfully traverse this rejection, but have amended the claims in a manner believed render the rejection moot.

Applicants have amended the claims to recite "... a DNA fragment of an isoflavone *O*-methyltransferase gene, said gene comprising SEQ ID NO:1 or a sequence exhibiting hybridization with SEQ ID NO:1 under conditions of 0.2 x SSC, 0.1 % SDS at 42°C...." or "recombinant DNA sequence encoding an isoflavone *O*-methyltransferase gene, said gene comprising SEQ ID NO:1 or a sequence exhibiting hybridization with

SEQ ID NO:1 under conditions of 0.2 x SSC, 0.1 % SDS at 42°C...” Applicants note that the amendments fully define the genus of claimed subject matter, which is fully supported by SEQ ID NO:1 and the remainder of the specification. The claimed subject matter is defined by structure and function to a discrete class of subject matter fully within the scope of the first paragraph of §112. Support for amendment to the claims may be found, at least, at page 15, line 15, and on pages 23-24 of the specification.

It is believed that the rejection is moot in light of the amendment. Therefore, Applicants respectfully request removal of the rejection under 35 U.S.C. §112, first paragraph for lacking written description.

E. Rejection Under 35 U.S.C. §112, First Paragraph – Enablement are Overcome

The Action contends that claims 1-14, 36-38 and 43-46 are rejected under 35 U.S.C. §112, first paragraph as not being enabling by the specification. The Action asserts that the specification is not reasonably enabling for a method of increasing disease resistance and increasing levels of 4'*O*-methylated isoflavonoids in any plant that natively produces 4'*O*-methylated isoflavonoids by transformation using any isoflavonoid *O*-methyltransferase gene, or with a DNA fragment that hybridizes to SEQ ID NO:1 under conditions of moderate stringency other than SEQ ID NO:1; or producing 4'*O*-methylated isoflavonoids by transformation of a non 4'*O*-methylated isoflavonoid producing plant using any isoflavone *O*-methyltransferase gene in combination with any number of DNA sequences encoding enzymes necessary for isoflavonoid biosynthesis. In response Applicants have amended claims 1-14, 36-38 and 43-46, as discussed *supra*, in a manner

believed to overcome this rejection. The amendments define the claimed subject matter to a discrete scope of subject matter fully within the subject matter enabled by the working examples, sequence listing and descriptions in the specification. Applicants therefore submit that the full scope of the current claims is enabled and therefore, respectfully request removal of the rejection under 35 U.S.C. §112, first paragraph for lacking enablement.

F. Rejection of Claims Under 35 U.S.C. §112, Second Paragraph are Overcome

The Action has rejected claims 5, 12, 14, and 38 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter the Applicants regard as the invention. However, the grounds for the rejection have not been stated. If the rejection is maintained, Applicants respectfully request that the basis for the rejection be made of record. It is nonetheless noted that claims 5, 12, 14 and 38 have been canceled herein without prejudice or disclaimer.

It is believed that the rejection is now moot. Therefore, Applicants respectfully request removal of the rejection under 35 U.S.C. §112, second paragraph.

G. Rejection of the Claims Under 35 U.S.C. §101 are Overcome

The Action has rejected claims 44-46 under 35 U.S.C. §101 as being directed to non-statutory subject matter. The Action contends that the claims are drawn to seeds or progeny of transgenic plants encompassing untransformed plants and seeds, which are a product of nature and thus not patentable subject matter. In response, Applicants have amended claims 44-46 in a manner believed to resolve this issue.


In view of the foregoing, Applicants believe that the rejection is made moot and therefore respectfully request removal of the rejection under 35 U.S.C. §101.

H. Conclusion

In light of the foregoing remarks, Applicants submit that all claims in the present case are in condition for allowance, and an early indication to that effect is earnestly solicited.

The Examiner is invited to contact the undersigned at (512)536-3085 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,



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